GENERAL DESCRIPTION

Rhombus-MFU transceiver unit is a high performance contact less IC card reader that is designed for reading the Serial Number of the Mifare I compatible IC cards and is a major component in RFID(Radio Frequency Identification) reader system. Through the unique real-time allocation function design, it can be applied in office/home security, personal identification, access control, anti-forgery and production control systems etc.

FEATURES

- ⌘ Built-in transceiver antenna;
- ⌘ Maximum effective distance up to 100mm;
- ⌘ Low power dissipation with single power supply;
- ⌘ Support multi-format and can be allocated in real time;
- ⌘ Provide two levels security of real-time allocation: allocation password and allocation lock;
- ⌘ Support Mifare I compatible IC cards;
- ⌘ Built-in bi-color LED and buzzer;

INTERFACE DESCRIPTION

NUMBER	COLOR	SYMBOL	DESCRIPTION
1	Red	VCC	Positive Power Supply
2	Black	GND	GND
3	Green	WD0	Wiegand data 0 output or ABA data output
4	White	WD1	Wiegand data 1 output or ABA clock output
5	Brown	HOLD	Wiegand HOLD output or ABA card presenting output
6	Blue	LED	Color of LED changing when connected to ground
7	Grey	BUZ	Buzzer ringing when connected to ground

CHARACTERISTICS

⌘ Absolute Maximum Ratings

ITEM	SYMBOL	VALUE	UNIT
Power Supply	VCC	15	V
Operating Temp.	T_{OPR}	-20~+70	℃
Storage Temp.	T_{STR}	-55~+125	℃

⌘ Electrical and Mechanical Specification

Under T_A=25℃, VCC=+12V unless specified

ITEM	SYMBOL	MIN	TYP	MAX	UNIT
Power Supply	VCC	10	12	15	V
Current Supply	I_C		70	120	mA
Operation Freq.	F_{REQ}		13.56		MHZ
Effective Distance*	DIS	0	50	100	mm

⌘ Effective Distance depends on tags and operating environment.

Application Information

Rhombus-MFU uses build-in LED and buzzer to give prompting with sound and light for different operation and allocation condition. The details are showed as below:

OPERATION	PROMPTING
The reader is in blank condition[1](unallocated), starting	LED glitters in turns in red and green[2]
The reader has been allocated, starting	BUZZER buzzes one time
The reader has been locked allocation, starting	BUZZER buzzes one time as pattern “long-short”
The reader has read normal card successfully	BUZZER buzzes one time and LED glitters one time
The reader(unlocked) has read master card successfully	BUZZER buzzes one time as pattern “short-short-long”
The reader(locked) has read master card successfully[4]	BUZZER buzzes one time as pattern “long-short-long-short-long-short”
The reader has read master card unsuccessfully[3]	BUZZER buzzes one time as pattern “short - short- short -short- short”
The reader has checked mistakes by itself	LED glitters in turn in red and green[2]

Note 1: the reader has been set as default when leaving the factory;

Note 2: the reader only responses the allocated master card on this condition;

Note 3: the reasons of allocating reader unsuccessfully may be including blank master card, mistake messages set by master card, unconformable allocation password and environment interference, etc.;

Note 4: on the condition of locking allocation, the reader still do not change the present locked allocation after reading the allocated master card successfully.

Note: Rhombus’ products must work with linear regulated power supply, and other kinds of power supply are prohibited.